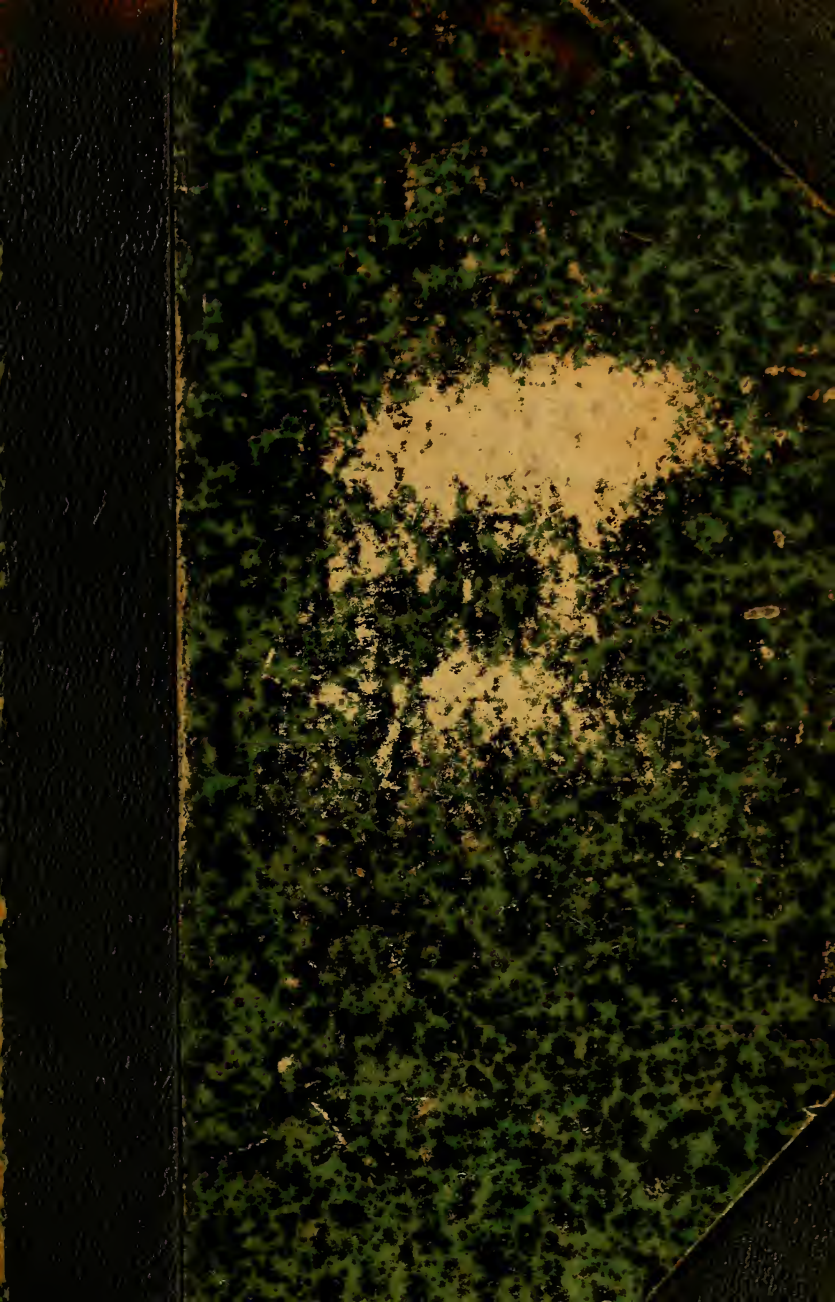

NINETIETH

ANNUAL CATALOGUE

OF THE

MEDICAL SCHOOL

(BOSTON)

OF

HARVARD UNIVERSITY.

1872-73.

[Reprinted from the Catalogue of the University.]

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1873.

MEDICAL SCHOOL.

BOSTON.

NINETIETH ANNUAL ANNOUNCEMENT. (1872-73.)

The plan of Study in this School was radically changed in 1871, to take effect from September 28th of that year. Instruction is now given by lectures, recitations, clinical teaching, and practical exercises uniformly distributed throughout the academic year. This year begins on the Thursday following the last Wednesday in September, and ends on the last Wednesday in June; it is divided into two equal terms, with a recess of one week between them. There is also a recess of one week at Christmas. Either of these two terms is more than equivalent to the former "Winter Session," as regards the amount and character of the instruction.

The course of instruction has been greatly enlarged, so as to extend over three years, and has been so arranged as to carry the student progressively and systematically from one subject to another in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is substituted for, or added to, the usual didactic lectures, and laboratory work is as much required of every student as attendance at lectures and recitations.

Instead of the customary hasty oral examination for the degree of Doctor of Medicine, held at the end of the three years' period of study, a series of examinations on all the main subjects of medical instruction has been distributed for regular students through the whole three years; but they may be passed by other students either all at once at the end of their course, or, successively, at several times. Every candidate for the degree must hereafter pass a satisfactory examination in every one of the principal departments of medical instruction at some time during his period of study. The Faculty are convinced that this requisition will present no serious obstacle whatever to those who do not neglect their opportunities.

FACULTY.

CHARLES W. ELIOT, LL.D., *President.*
CALVIN ELLIS, M. D., *Jackson Professor of Clinical Medicine, Dean.*
JOHN B. S. JACKSON, M. D., *Shattuck Professor of Morbid Anatomy, and Curator of the Anatomical Museum.*
OLIVER W. HOLMES, M. D., *Parkman Professor of Anatomy.*
GEORGE C. SHATTUCK, M. D., *Hersey Professor of the Theory and Practice of Physic.*
HENRY J. BIGELOW, M. D., *Professor of Surgery.*
GEORGE DERBY, M. D., *Professor of Hygiene.*
JOHN E. TYLER, M. D., *Professor of Mental Diseases.*
CHARLES E. BUCKINGHAM, M. D., *Professor of Obstetrics and Medical Jurisprudence.*
FRANCIS MINOT, M. D., *Assistant Professor of the Theory and Practice of Medicine, and Clinical Lecturer on the Diseases of Women and Children.*
JOHN P. REYNOLDS, M. D., *Instructor in Obstetrics.*
HENRY W. WILLIAMS, M. D., *Professor of Ophthalmology.*
JOHN N. BORLAND, M. D., *Instructor in Clinical Medicine.*
DAVID W. CHEEVER, M. D., *Adjunct Professor of Clinical Surgery.*
JAMES C. WHITE, M. D., *Professor of Dermatology.*
ROBERT T. EDES, M. D., *Assistant Professor of Materia Medica.*
HENRY P. BOWDITCH, M. D., *Assistant Professor of Physiology.*
CHARLES BURNHAM PORTER, M. D., *Demonstrator of Anatomy.*
FREDERICK I. KNIGHT, M. D., *Instructor in Percussion, Auscultation, and Laryngoscopy.*
JOHN C. WARREN, M. D., *Instructor in Surgery.*
REGINALD H. FITZ, M. D., *Instructor in Pathological Anatomy.*
EDWARD S. WOOD, M. D., *Assistant Professor of Chemistry.*

OTHER INSTRUCTORS.

HENRY KEMBLE OLIVER, M. D., *Lecturer on Laryngoscopy.*
CLARENCE JOHN BLAKE, M. D., *Lecturer on Otology.*
JOHN ORNE GREEN, M. D., *Lecturer on Otology.*
FRANCIS BOOTT GREENOUGH, M. D., *Lecturer on Syphilis.*
JAMES J. PUTNAM, M. D., *Lecturer on Application of Electricity in Nervous Diseases.*
HENRY HARRIS AUBREY BEACH, M. D., *Assistant Demonstrator of Anatomy.*

STUDENTS.

Doctors of Medicine.

NAME.	RESIDENCE.
Bishop, Pharnel Euclid, M. D.,	*Pawtucket, R. I.*
Bridgman, Marcus Fayette, M. D.,	
Carbee, Samuel Powers, M. D.,	*Haverhill, N. H.*
Carleton, Charles Monro, M. D.,	*Norwich, Conn.*
Evans, Earl, M. D.,	*Winchester, N. H.*
Hilz, Charles William, M. D.,	*Chester, N. S.*
Nichols, Charles Byron, M. D.,	*Dartmouth, N. H.*
Smith, Arthur Newell, M. D.,	*Baring, Maine.*

Third Year's Students.

Bacon, Joshua Edgar,	*Waukesha, Wis.*
Barss, James Richmond,	*Bermuda, W. I.*
Buckingham, Edward Marshall,	*Boston.*
Bush, John Foster,	*Boston.*
Clapp, Levi Wheaton, A. B. (*Brown Univ., R. I.*),	*Pawtucket, R. I.*
Foster, Arthur Louis, A. B. (*Williams Coll.*),	*Boston.*
Henchey, John Henry,	*Quebec, C. E.*
Howard, William Wells,	*Waltham.*
Loring, Francis Boott,	*Boston.*
McSwain, Angus,	*Prince Edward Island.*
Mann, Samuel Hill,	*Providence, R. I.*
Moore, Edward Jesse,	*Lowell.*
Porter, George Whipple, A. B. (*Brown Univ., R. I.*),	*Lincoln, R. I.*
Rotch, Thomas Morgan, A. B.,	*Cambridge.*
Spear, Edmund Doe, Jr.,	*Boston.*
Stedman, Henry Rust,	*Boston.*
Warren, Herbert,	*Leicester.*

Second Year's Students.

Abbott, Fletcher Morton,	*Boston.*
Appleton, William, Jr.,	*Boston.*
Bigelow, William Sturgis, A. B.,	*Boston.*
Burchmore, John Henry,	*Charlestown.*
Booth, Edward Chauncey, A. B.,	*Somerville.*
Bradford, Henry Withington,	*Randolph.*
Bryant, Lewis Lincoln,	*Cambridge.*
Bulfinch, George Greenleaf,	*Boston.*

Clark, Jonas, Jr.,	*Waltham.*
Daniels, Edwin Alfred,	*Auburndale.*
Davenport, Frank Henry, A. B. (*Williams Coll.*),	*Boston.*
Dunbar, Eugene Fillmore,	*Boston.*
Dunn, William Aloysius,	*Boston.*
Ela, Walter, A. B.,	*Cambridge.*
Fleming, James Aloysius,	*Boston.*
Garland, George Minott, A. B.,	*Lawrence.*
Gerry, Edwin Peabody, A. M. (*Dart. Coll., N. H.*),	*E. Somerville.*
Hills, William Barker, A. B.,	*Plaistow, N. H.*
Howe, Samuel, A. B.,	*Cambridge.*
Hutchinson, Alexander Rankin,	*Miramichi, N. B.*
Lawrence, Alexander Bloomfield,	*St. John, N. B.*
Lewis, Bennett Sperry,	*Bridgeport, Ct.*
Loring, Robert Pearmain,	*Brookline.*
Lovering, Phillips Adams, A. B.,	*Somerville.*
Mosely, William Edward,	*Medford.*
Stedman, George, A. B.,	*Boston.*
Thomas, Flavel Shurtleff,	*Hanson.*
Wheeler, Morris Plumer,	*Boston.*
White, Cornelius Edwin,	*Taunton.*
Whitney, William Fiske, A. B.,	*Boston.*
Wilder, Frank Blaisdell, A. B. (*Williams Coll.*),	*Boston.*
Williams, Charles Herbert, A. B.,	*Boston.*

First Year's Students.

Batchelder, George Henry Clement,	*Newburyport.*
Bell, Read Letts, A. B. (*Denison Univ., Ohio*),	*Granville, Ohio.*
Bickford, George Coburn,	*Charlestown.*
Bowen, Seranus,	*Boston.*
Buxton, Gonzalo Edward,	*Worcester.*
Cabot, Arthur Tracy, A. B.,	*Boston.*
Clark, Charles Edward, A. B. (*Bowdoin Coll., Me.*),	*Portland, Me.*
Connolly, John James,	*Boston.*
Cutter, Charles Kimball, A. B. (*Tufts Coll.*),	*East Somerville.*
Emery, Isaiah Stetson,	*Bangor, Me.*
Gay, Almon Debois,	*Belmont.*
Gorman, Benedict Fenwick,	*Providence, R. I.*
Gunter, Adolphus Birum,	*Fredericton, N. B.*
Hicks, Herbert Dexter,	*Arlington.*
Hunking, Charles Dustin, A. B.,	*Haverhill.*

Hunt, Frank Whittemore,	*Nashua, N. H.*
Jackson, William Leavit,	*Boston.*
Kennealy, John Henry,	*Boston.*
La Fortune, Joseph, A. B. (*Joliette Coll.*),	*Joliette, C. E.*
Larimer, Flavius Melancthon,	*Le Claire, Iowa.*
Masforroll, Manuel, A. B. (*Santiago de Cuba*),	*Santiago, Cuba.*
McCormick, Cornelius Joseph,	*Milford.*
McClean, George Chesley,	*Springfield.*
Montague, George Prescott, A. B.,	*Chelsea.*
Moore, Frederick Fisk,	*Cambridge.*
Morong, Arthur Bennet, A. B. (*Amherst Coll.*),	*Boston.*
O'Connell, John David,	*East Lexington.*
Perkins, Thomas Lyman,	*Salem.*
Place, Charles Ashton,	*East Walpole.*
Putney, George Ellis,	*Boston.*
Rand, Alfred, A. B.,	*Charlestown.*
Reardon, Jeremiah John,	*Boston.*
Robinson, Samuel Quincy, B. S. (*Dart. Coll.*),	*Boston.*
Spalding, George A., A. B. (*Yale Coll.*),	*Greenup, Ky.*
Smith, George Edward,	*Zanesville, O.*
Swan, Justin Morrill,	*West Bridgewater.*
Sweetser, Arthur Frank,	*Greenwood.*
Teele, Jonathan Merle, A. B. (*Tufts Coll.*),	*Somerville.*
Tilden, George Horton, A. B.,	*Boston.*
Webber, Frank Orlando,	*Cambridge.*
White, Andrew Smart,	*Boston.*
Winn, William Adams, A. B.,	*Arlington.*
Yerxa, Alfred Alonzo,	*Fredericton, N. B.*
Young, Parker Ambrose,	*Boston.*

Unclassified.

Brown, Henry Wheeler,	*Croydon, N. H.*
Brown, Simon Van Buren,	*Allston.*
Bryant, William Nelson,	*Middlesex, Vt.*
Burnett, L. W.,	
Byers, John Andrew, A. B. (*Univ. of N. B.*),	*St. John, N. B.*
Caldwell, George Peters,	*St. John, N. B.*
Cannon, David Howland,	*Mattapoisett.*
Carolin, Wm. Terence,	*Lowell.*
Cliff, Leander Albert, A. B. (*Univ. of N. B.*),	*Fredericton, N. B.*
Coker, John Henry,	*Denton, Md.*
Coburn, George Albert, A. M. (*Amherst Coll.*),	*Cambridge.*

Colburn, Charles Henry,	*Boston.*
Cole, Martin, Jr.,	*Montague, N. J.*
Crosby, William Sage, A. B.,	*Boston.*
Cross, Benjamin Putnam, A. B. (*Union Coll.*),	*Newton Centre.*
Cunningham, Thomas Edward,	*Charlottetown, P. E. I.*
Currie, John Zebulon, A. B. (*Univ. of N. B.*),	*Fredericton, N. B.*
Dale, William Henry,	*Boston.*
Deinstadt, William McKay,	*Shelburne, N. S.*
Deš Brisay, Th. De La Cour,	*Bridgewater, N. S.*
Dixwell, John, A. B.,	*Boston.*
Eaton, Francis Eugene,	*Granville, N. S.*
Eayrs, Marshall Perry,	*Boston.*
Finn, James Anthony, A. M. (*Calvert Coll., Md.*),	*Lowell.*
Foley, James Purcell, A. B. (*Troy Univ., N. Y.*),	*Salem.*
Fox, George Townshend, A. B. (*Univ. of Mich.*),	*Detroit, Mich.*
French, William Henry, A. B.,	*Laconia, N. H.*
Giles, Alfred Ellenwood, A. B. (*Brown Univ.*), LL. B. (*Harv.*),	*Hyde Park.*
Goodrich, Roscoe Hinman,	*Norwich, Conn.*
Granger, William Davis, A. B. (*Williams Coll.*),	*Providence, R. I.*
Gregg, John Areole,	*Somerville.*
Hallaren, Robert James, A. B. (*St. Mary's Coll., Md.*),	*Lowell.*
Harrison, Richard,	*St. John, N. B.*
Hodges, Edward Francis,	*Boston.*
Hooper, Frank Henry,	*Boston.*
Jenkins, George Oscar,	*Boston.*
Jones, Claudius Marcellus, A. B.	*Worcester.*
Kelley, Seth Wight, A. B. (*Dart. Coll., N. H.*),	*Cambridge.*
Kelley, Edward Joseph,	*Uxbridge.*
Kittredge, Thomas,	*North Andover.*
Lawrence, Robert Means,	*Boston.*
Leach, Charles Franklin,	*Cambridge.*
Lincoln, Guy Alvan Theodore,	*Boston.*
Libbey, George Willard,	*Saccarappa, Me.*
Martin, Stephen Crosby,	*Boston.*
McDonald, James Joseph,	*Lowell.*
Middlemas, Frank,	*Cornwallis, N. S.*
Miller, Charles John,	*Pictou, N. S.*
Montenegro, Francisco,	*Nicaragua, Cent. Amer.*
Mystwall, Duncan Barbour,	*Fredericton, N. B.*
Norfolk, Walter Jenkes,	*Salem.*
O'Leary, M. F.	

Perrin, Nelson, A. B. (*Brown Univ.*),	*Pawtucket, R. I.*
Sanborn, Wilbur Fisk,	*Sandwich, N. H.*
Sherburne, John Spofford,	*Boston.*
Spear, Hugh Johnston,	*Lower Woodstock, N. B.*
Spiller, Frederick Miles,	*Boston.*
Sommerville, Alexander M.	*Cornwallis, N. S.*
Stover, Joseph William,	*Boston.*
Swan, Caleb,	*W. Bridgewater.*
Sweat, Henry Walter,	*Sandwich Centre, N. H.*
Tocque, Ingham Sutcliff,	*Toronto, Canada.*
Thayer, Eli, Jr.,	*Boston.*
Tucker, Edward Tobey, A. B. (*Brown Univ., R. I.*),	*New Bedford.*
Turner, Edward Burhans,	*Montague, N. J.*
Tyng, Stephen Higginson,	*Cambridge.*
Wallace, William Henry,	*Hillsborough, N. B.*
Walsh, Edmund,	*Summerville, P. E. I.*
Woodworth, William Sommerville,	*Cornwallis, N. S.*

DIVISION OF STUDIES.

First year. — Anatomy, Physiology, and General Chemistry.

Second year. — Medical Chemistry, Materia Medica, Pathological Anatomy, Theory and Practice of Medicine, Clinical Medicine, Surgery and Clinical Surgery.

Third year. — Pathological Anatomy, Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery and Clinical Surgery.

COURSE OF INSTRUCTION.

The following methods of instruction are adopted in the several departments : —

Anatomy. — Lectures ; various practical exercises, including abundant dissection under the direction of the Demonstrator ; recitations from text-books ; and histology.

Physiology. — Lectures, recitations, and practical demonstrations in the laboratory. To third-class students opportunities are given for original investigations in the laboratory.

Chemistry is taught mainly by practical work in the laboratory, each student having his own desk and apparatus. General Chemistry is taught in the first term and qualitative analysis in the second term of the first year. Besides the laboratory work, there is a lecture and a recitation every week. In the second year, medical chemistry is taught by lectures and laboratory work.

Pathological Anatomy is taught by lectures, recitations, and practical instruction in pathological histology. The collection of the Warren Anatomical Museum is used to illustrate the lectures, and many morbid specimens are shown in a fresh state. Students also receive practical instruction in the method of making autopsies, to which they are admitted at both hospitals. Special classes in pathological histology, including the diagnosis of tumors, are formed, students being provided with a microscope and required to prepare the various objects.

The Theory and Practice of Medicine. — Lectures, recitations, and hospital visits.

Clinical Medicine. — Daily instruction is given in this department by hospital visits and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticized. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the "Clinical Conference," affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticized by the class, by the Professor of Clinical Medicine, and other teachers in the school. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy. These exercises afford students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

Surgery. — Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Surgical Histology, Bandaging, and Operative Surgery. In the latter, third-year students are supplied with material for repeating the usual surgical operations.

Instruction in Clinical Surgery is given at the Massachusetts General Hospital and City Hospital throughout the year as follows: —

FIRST TERM.

Clinical Lectures on cases, per week	2
Surgical Visits in the hospital wards, per week	2
Public operating days, per week	2
Per week	6

SECOND TERM.

Clinical Lectures on Cases, per week	1
Surgical Visits in the hospital wards, per week	3
Public operating days, per week	3
Per week	7

Materia Medica and Therapeutics.— Materia Medica is taught by recitations, as this mode of instruction is best adapted for imparting that practical knowledge of drugs and their properties, which can only be obtained from the examination of specimens and pharmaceutical preparations, of which there is an extensive collection. Therapeutics, or the physiological action of drugs and their application to disease, are taught in the third year by lectures.

Obstetrics. — Lectures and recitations. Students are instructed in the usual operations on the manikin, and will have opportunities to take charge of cases of midwifery in their third year.

Diseases of Women and Children. — Lectures.

Mental Diseases. — Lectures.

Hygiene. — A course of lectures on Hygiene is given.

Ophthalmology. — A complete course is delivered upon the diseases of the eye.

Dermatology is taught by lectures and clinical illustration. The large number of out-patients at the Massachusetts General Hospital furnishes ample opportunities for illustration.

Syphilis. — Recitations.

Otology. — Lectures.

Laryngoscopy, Auscultation, and Percussion. — Lectures and Demonstrations.

Electro-therapeutics. — Lectures with Demonstrations at the Massachusetts General Hospital.

CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

The Massachusetts General Hospital. — This Hospital was established fifty years ago. During the past year 1,300 patients were treated in the wards, and 9,500 in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students with the attending physicians and surgeons. The opportunities for becoming acquainted with general surgery are very great. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have recently been established in connection with the out-patient department: Dermatology, Laryngoscopy, Electro-therapeutics.

The Hospital is adjacent to the Medical College, and its wards are open to the students on four days in the week.

The City Hospital was opened in 1864. During the past year 2,500 cases were treated in its wards, and 11,000 in its various out-patient departments. The Medical wards always contain many cases of acute disease, which are constantly being renewed. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, 400 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. These include general surgical, and also ophthalmic operations. Diseases of the Eye, the Ear, and the Skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons three times a week.

In these two Hospitals the facilities for witnessing Operative Surgery are unsurpassed. Twice a week in the first term, and three times a week in the second term, operations are performed in the presence of the class. The number of these operations is large, reaching nearly *two thousand* a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Massachusetts Charitable Eye and Ear Infirmary. — The three thousand patients annually treated at this institution present every variety of disease of the Eye and Ear, and supply a large number of Operations.

The Marine Hospital at Chelsea receives from the shipping of the port a large number of patients who furnish examples of the diseases of foreign countries and of distant parts of the United States. Many cases of Venereal disease in its various stages are treated annually.

The Boston Dispensary. — Thirty thousand patients were treated at this Public Charity during the past year. Students have excellent opportunities to see minor surgery, many of the diseases of children, and to practise auscultation and percussion.

Hospital Appointments. — From eighteen to twenty students are selected annually from the class to serve as House Officers of the various Hospitals.

EXAMINATIONS.

The regular examinations are held in the following order: —

At the end of the first year: Anatomy, Physiology, and General Chemistry.

At the end of the second year: Medical Chemistry, Materia Medica, and Pathological Anatomy.

At the end of the third year: Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

The regular examinations are held at the end of each year in June, but others are also held a week before the opening of the school in

September, and at the close of the first term in February. In 1872–73 examinations will begin June 19, September 23, and February 10.

All examinations are conducted in part, at least, by questions and answers upon paper. The examination in Clinical Medicine is conducted at the bedside. For specimens of recent examination-papers, see pp. 17–22. No student will receive his degree until he has passed a satisfactory examination in all the above-mentioned subjects, and presented a certificate from the Demonstrator of Anatomy that he has satisfactorily dissected the three parts of the body. Those who fail in any subject may present themselves in that subject again at the next examination.

DIVISION OF STUDENTS.

Students who take the regular course of the School are divided into three classes, according to their time of study and proficiency. These students are classified in the catalogues.

Students may be admitted to advanced standing in the regular course, but all who apply for admission into the second or third year's class must pass an examination in the branches already pursued by the class to which they seek admission. No student shall advance with his class, or be admitted to advanced standing, until he has passed the required examination in the studies of the year, or a majority of them.

Students may be admitted to the school and become candidates for a degree without joining the regular classes, pursuing their studies in such order as may be advised. Such students may pass the required examinations either one subject at a time, several subjects at a time, or all the subjects at once, but only at the stated seasons of examination.

Students who do not intend to offer themselves for a degree will also be received at any part of the course for one term or more ; or in a single department, by paying such fees as may be agreed upon.

All the subjects of the whole three years' course are taught every year, so that a student who is unable to remain in the school throughout the course may nevertheless in any one year get the benefit of all the instruction given in any of the required branches.

Any student of the school may obtain, without an examination, a certificate, which will be evidence of attendance upon lectures or time spent in study.

REQUIREMENTS FOR A DEGREE.

Every candidate must be twenty-one years of age, and of good moral character ; must give evidence of having studied medicine three full years ;

have spent at least one continuous year at this school; have presented a satisfactory thesis; and have passed the required examinations.

LIBRARIES.

The Library at the Medical College is open to the student on the deposit of five dollars, to be refunded to him when he may desire after returning all books.

The Library of the University is open to the students.

The Boston Public Library, which contains a large collection of medical books, may also be used by students recommended by the Dean.

BOYLSTON MEDICAL SOCIETY.

This society, composed of medical students, meets at stated intervals for the discussion of medical topics, and is presided over by a physician selected by the members. Prizes, in money or books, are awarded annually to the writers of essays judged worthy of such distinction by a committee of physicians selected for that purpose by the society.

FEES AND EXPENSES.

For Matriculation, five dollars; for a year, two hundred dollars; for either term, one hundred and twenty dollars; for graduation, thirty dollars. The students' expenses may be reduced, in accordance with his means, to the standard which prevails in smaller cities or country towns. In fact, students may live nearly as cheaply in Boston as elsewhere. The Janitor of the College will advise students in the selection of boarding-places, and will always have a list of such as are in the vicinity of the College Building, varying in their rate of charges.

Students who wish to join the school must enter their names with the Dean of the Faculty.

College students intending to study medicine are advised to pay special attention to the study of Natural History, Chemistry, Physics, and the French and German languages, while in College.

☞ This plan went into operation on September 28, 1871, but the changes above described do not affect students who had previously entered the school, unless by their choice. No person will be allowed to graduate under the old system after the February examination of 1874. No gratuitous instruction in place of a third course of lectures will be given after the fall of 1872.

COURSE OF STUDY FOR GRADUATES.

The Faculty have established a course, of which the following is a programme, —

For the purpose of affording to those already Graduates in Medicine, additional facilities for pursuing clinical, laboratory, and other studies, for which they had not previously found leisure, in such subjects as may specially interest them; and as a substitute in part for the opportunities heretofore sought for in Europe.

Physiology. — Opportunities for original investigation in the Physiological laboratory. Fee thirty dollars per Term.

Medical Chemistry. — Practical instruction in the Chemical laboratory in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations; with the application of the microscope to these processes. General analysis also, if desired. Laboratory Fee thirty dollars per Term.

Pathological Anatomy. — Practical instruction in normal and pathological Histology, in the Microscopical laboratory; and opportunity for witnessing and making autopsies. Fee twenty dollars per Term.

Surgery. — A practical Course of Operative Surgery and instruction in the application of bandages and apparatus. Fee fifteen dollars per Term.

Auscultation, Percussion, and Laryngoscopy practically taught, and diseases of the larynx demonstrated by the aid of the oxyhydrogen light. Fee twenty dollars per Term.

Ophthalmology. — Clinical instruction and lectures on diseases of the eye, and demonstrations of the methods of performing operations. Exercises in the use of the ophthalmoscope. Fee twenty-five dollars per Term.

Otology. — Lectures and clinical instruction on diseases of the ear. Fee fifteen dollars per Term.

Hygiene. — Lectures (in Second Term). Fee five dollars.

Dermatology. — Clinical instruction in diseases of the skin, illustrated by patients in this department at the Massachusetts General Hospital. Lectures. Fee twenty-five dollars per Term.

Syphilis. — Clinical instruction at the Boston Dispensary and the Marine Hospital. (Second Term.) Fee fifteen dollars.

Psychological Medicine. — Lectures on nervous and mental diseases. (Second Term.) Fee five dollars.

Electro-therapeutics. — Practical illustrations of the application of various forms of electricity. Lectures. Fee fifteen dollars per Term.

Gynæcology. — Lectures on diseases of women. (Second Term.) Fee ten dollars.

Obstetrics. — Cases supplied. Fee ten dollars.

The second term of this year begins on Monday, February 10.

Those pursuing this Course may elect the studies to which they will give their attention, and allot the time they will devote to each. They will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on this course of advanced study. Graduates of other Medical Schools who may desire to obtain the Degree of M. D. at this University will be admitted to examination for this Degree after a year's study in the Graduates' Course.

The Fee for a year is $200
" for one Term 120

And for any of the Special Courses such Fees as are above specified.

For further information address

DR. C. ELLIS, *Dean*,
114 Boylston Street, Boston, Mass.

EXAMINATION PAPERS IN MEDICINE.

FIRST YEAR'S STUDIES.

ANATOMY.

1. How many kinds of epithelium are there, and where is each found?
2. Mention the different forms in which the *white* fibrous substance is used in the system.
3. Describe the muscular tissue of animal, and that of organic life, and mention where each is found. Which is found in the heart?
4. Describe the structure of bone.
5. Describe the structure of the two forms of nervous substance, — the gray and white.
6. What is a serous membrane, and how many of them are there?
7. Describe the different anatomical structure of various glands, and give examples of each.
8. Describe the scapula and its connections with the trunk.
9. Describe the muscles that *flex* the leg on the thigh.
10. Describe the Obliquus Externus.
11. What are the extent and relations of the common carotid artery?
12. Describe the circulation in the liver.
13. Into what vein do the cerebral sinuses empty themselves?
14. Describe the lungs.
15. What are boundaries of the Inguinal Canal?
16. Enumerate the cerebral nerves.
17. What is the distribution of the 5th pair?
18. Mention the chief ganglia of the sympathetic system.
19. What are the *transverse* commissures found uniting different parts of the Encephalon?
20. What anatomical elements are found in the retina?

PHYSIOLOGY.

1. What is the source of the force manifested in the animal body?
2. Define what is meant by a "nutriment."
3. Describe the mechanism of deglutition.
4. Describe the mechanism of vomiting.
5. Why does not the gastric juice digest the walls of the stomach?
6. What reasons are there for supposing that albuminoid substances may be absorbed as such, i. e. without being changed into peptones?
7. What gases are found in the intestine, and what is their origin?
8. What are the functions of the bile?
9. What are the functions of the pancreatic fluid?
10. What are the functions of the blood?

11. Explain the cause and the mechanism of the respiratory movements.
12. What is the effect of respiration on the arterial blood-tension?
13. Explain the action of the vasomotor nerves in regulating the heat of the body.
14. In what form and by what organs is the nitrogen of the food eliminated from the body?
15. What is a reflex action? Give examples.
16. What centres of reflex action are situated in the medulla oblongata?
17. What is the effect of section of the vagus nerve?
18. Explain the necessity for, and the mechanism of, accommodation in the eye.
19. What is the function of the Eustachian tube?
20. How many distinct sorts of impressions are conveyed through the sense of touch?

GENERAL CHEMISTRY.

1. What is Combustion? Explain the effects produced by the ignition of large quantities of coal-gas and air.
2. What is a deodorizer; a disinfectant; an antiseptic? Explain the bleaching and disinfecting action of Chlorine.
3. What is understood by the term quantivalence?
4. Describe the properties of K I. How can you detect the presence of K I O_3 in K I?
5. Mention some of the sources of C O_2 in the atmosphere. Why does the proportion of C O_2 and O in the atmosphere remain the same?
6. How can you distinguish between the salts of K, Na, and N H_4 by means of Pt Cl_4?
7. Describe and write the reaction which takes place when $(N\ H_4)_2\ C_2\ O_4$ is added to the solution of a Calcic salt.
8. What is the difference between a Ferr*ous* and a Ferr*ic* salt? How may the one be converted into the other? Give the characteristic tests for Iron, distinguishing between Ferrous and Ferric reactions.
9. What are the formulæ for Arsenious and Arsenic acids? Write two reactions showing the distinction between arsenites and arseniates.
10. How may Antimony be detected in the presence of Arsenic?
11. Mention the principal tests for salts of Copper.
12. What is the difference between Mercur*ous* and Mercur*ic* salts? Write the formulæ for Mercurous and Mercuric Chlorides.
13. What is the action of Stannous Chloride ($Sn\ Cl_2$) upon Mercurous and Mercuric compounds? Of Potassic Iodide (K I)?
14. What metals are precipitated from acid solutions by $H_2\ S$?
15. Give the separation of members of the 6th Group from each other, giving the reasons for each step of the process.
16. How may Cane and Grape Sugar be distinguished from each other analytically?
17. What is fermentation?
18. Explain the action of heat and $H_2\ S\ O_4$ upon Alcohol.
19. How may Alcohol be converted into Acetic Acid? What is the intermediate step in the process?
20. What are the principal monobasic alcohols? What is the relation between Alcohol, Ether, Acetic Aldehyd, and Acetic Acid?

SECOND YEAR'S STUDIES.

MEDICAL CHEMISTRY.

1. What organic chemical products are common to vegetable and animal life?

2. What progressive chemical changes take place in a piece of bread when eaten?

3. What are the products of metamorphosis of muscular tissue?

4. Of what do fats consist? What is the chemistry of soap-making? What is the difference between hard and soft soaps?

5. Nature of the coloring-matter of the blood? What are its relations to the pigment of the bile? How may blood-pigment be recognized when dried? Can human blood stains be distinguished from those of other animals?

6. Chemical relations of Urea to Uric Acid? What are the derivatives of Uric Acid?

7. What chemical changes take place in Urine on standing?

8. How determine whether the alkalinity of Urine be due to volatile or fixed alkali?

9. What abnormal constituents are found in Urine?

10. What are the possible fallacies in the Nitric Acid test for albumen? What connected with the heat test? Why not combine these tests?

11. What are the chemical reactions in Trommer's test? How determine the quantity of sugar in a pint of diabetic Urine?

12. How determine the presence of Oxalate of Lime in a Urinary Calculus?

13. Definition of a poison?

14. Symptoms and antidote in poisoning by Phosphorus? How may it be detected in the excreta?

15. What disease does acute arsenical poisoning simulate? Methods of detecting arsenic in wall-paper?

16. Process for detection of lead in the Urine?

17. What are the principal animal poisons?

18. What is the smallest fatal dose among the alkaloid poisons?

19. How may the presence of those alkaloids in the tissues be determined for which no chemical tests are known?

20. Describe the process for extraction and recognition of strychnia in the organs and fluids of the body.

MATERIA MEDICA.

1. What oils and fats are used in medicine? Doses? Prescription (all Latin or all English) for cod liver oil, to disguise taste?

2. Which evaporates most rapidly, alcohol, water, glycerine, or ether? Which next? Next? Least? What practical bearing have these facts?

3. What preparations of Ammonia are used in medicine? Doses?

4. What of Iodine?

5. What vegetable acids?

6. Mention eight preparations of iron, one of them being for local use; their doses and incompatibles.

7. Mention and describe briefly the active principles, preparations, and doses of Ipecac, Opium, Colchicum, Ergot, Gentian, Prun. virg., Aloes, Senna, Valerian, Cannabis Indica.

8. Mention members of mint family used in medicine.

9. In what ways may Chloroform be administered by the mouth?

10. What are the chemical steps from grape juice to brandy? To vinegar?

11. What is the difference between sherry, champagne, hock, and port?

12. Write a Latin or English prescription for Cathartic Pill, Draught, Cough Medicine, or Narcotic, to contain at least four ingredients.

PATHOLOGICAL ANATOMY.

1. Intussusception. Definition, forms, seat, extent, condition of mucous membrane, of peritoneum, result?

2. Internal strangulation. Condition of peritoneum, varieties, result?

3. Mortification. Causes, color, consistence, degree of moisture, result?

4. Dropsy. Causes, character of fluid, seat, varieties?

5. Hemorrhage (non-traumatic). From stomach, lungs. Method of escape of blood from vessels, and subsequent changes?

6. Coagulation. Ante and post mortem. Cause?

7. Cephalhæmatoma. Seat, appearance, result, cause?

8. Intra-cranial hemorrhage. Varieties as to cause, seat, frequency, and amount, with result?

9. Effusion of blood into kidneys and bladder. Causes?

10. Pleurisy. Seat (front or back, apex or base), products, amount, and rapidity of their formation, causes, results? Explain the formation of adhesions.

11. Peritonitis. Causes, seat, effect on abdominal organs, result as to membrane, and inflammatory products?

12. Simple meningitis. Seat, and membranes affected?

13. Tubercular meningitis. Seat, membranes affected, products of inflammation, character and amount of ventricular contents, conditions of septum lucidum, size and seat of tubercles, condition of brain and other organs?

14. Bronchitis. Varieties, seat, appearance, and character of secretion, results?

15. Croup. Seat, extent, how distinguish from diphtheria? How often complicated with pneumonia?

16. Laryngitis. Cause, tissue affected, extent, product?

17. Dysentery. Seat, appearances in early and late stages, products, character of ulcers and determination of their age, result, frequency and character of hepatic complications?

18. Cystitis. Describe early and advanced stages, condition of vesical walls, cavity, and contents, causes, complications.

19. Tuphlo-enteritis. Cause, complications, results?

20. Granular liver. Synonymes, meaning of cirrhosis, tissues affected, appearance, effects, and how explained?

THIRD YEAR'S STUDIES.

EXAMINATION IN THERAPEUTICS.

1. Mention eight cathartics, their doses, peculiarities of action, and cases to which adapted.
2. What diuretics increase water of urine? Which solids?
3. What is the action of a therapeutic dose of digitalis on the heart? of a poisonous dose? When and how does it act as a diuretic?
4. Describe stimulant action of morphia; poisonous action. How would you proceed in a dangerous case of the latter kind? What are the doses and different methods of application? By what circumstances is the dose modified? What therapeutic value have the other alkaloids of opium?
5. Upon what two theories is the action of quinia explained? What are its applications, exclusive of malarial diseases?
6. Describe methods of action of preparations of iron; of arsenic; of mercury; action of acetate of potassa in rheumatism.
7. What are the symptoms of lead poisoning? How treated? Write any prescriptions which might be necessary.
8. Write such prescriptions and rules of diet as it might be necessary to give in a case of chronic constipation; in a typhoid case in the second week with temp. 104° to 105°, delirium and wakefulness, and considerable diarrhœa.

SURGERY.

1. Hydrocele, varicocele, and scrotal hernia; their symptoms and differences?
2. What is cataract?
3. What is an acute bubo?
4. When and how would you give mercury in venereal diseases?
5. What is a varicose ulcer?
6. What is the difference between compression and concussion of the brain?
7. Describe the method of finding the femoral artery and of applying a ligature to it.
8. What is the cause of swelling in inflammation?
9. Describe the different dislocations of the hip-joint. What constitutes the difficulties in their reduction?
10. What is a carbuncle, and how would you treat it?
11. What is a boil?
12. What is an abscess?
13. What are the symptoms of hip disease?
14. What are the symptoms of caries of the vertebræ (Pott's disease)?
15. What are the symptoms of an impacted fracture of the neck of the thigh-bone?
16. Describe a club-foot briefly.
17. What is aneurism?
18. How would you do tracheotomy?
19. What is "cancer of the lip"?
20. How would you amputate a thigh?

THEORY AND PRACTICE.

1. What is meant by the word fever?
2. What is meant by the word inflammation?
3. Tell something about contagion and infection.
4. Are small-pox and chicken-pox related diseases?
5. The etiology of typhoid fever?
6. The difference between typhoid and typhus fevers?
7. The etiology of yellow fever?
8. The symptoms of alcoholismus?
9. The pathology of elephantiasis?
10. The relation of croup to diphtheria?
11. The treatment of membranous croup?
12. The diagnosis of epilepsy from hysteria?
13. The symptoms of locomotor ataxia?
14. The symptoms of cancer of the stomach?
15. The treatment of dysentery?
16. The pathology of Bright's disease?
17. The symptoms of lead poisoning?
18. The treatment of poisoning by opium?
19. The pathology of rheumatism?
20. What is meant by bilious colic?

OBSTETRICS.

How will you distinguish pregnancy from disease?

Give the symptoms of pregnancy. Which are the certain ones? Which are the uncertain ones?

What are the causes of delay in the first stage of labor? How should they be treated?

What circumstances call for instrumental interference? and how would you decide what instrument to use?

What are the causes of retained placenta? How will you treat it?

What are the objects of producing premature labor? How will you induce it artificially?

How far is it necessary to interfere in breech presentations?